



APPROVED	O.G.F.G.
BY.	CLASS:SUBCLASS
DRAFTSMAN	

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7001 VOM 8 8 075105

EcoRI RBS PelB leader  
 131 GAATTCATTAAAGAGGAGAAATTAACCATGAAATACCTATTGCCTACGGCAGCCGCTGGCT  
 1► M K Y L L P T A A A G  
 PstI  
 NcoI PvuII VH anti-CD3  
 192 TGCTGCTGCTGGCAGCTCAGCCGCCATGGCGCAGGTGCAGCTGCAGCAGTCTGGGGCTGAA  
 12► L L L L A A Q P A M A Q V Q L Q Q S G A E  
 Frame-H1  
 254 CTGGCAAGACCTGGGGCCTCAGTGAAGATGTCCTGCAAGGCTTCTGGCTACACCTTTACTAG  
 33► L A R P G A S V K M S C K A S G Y T F T R  
 CDR-H1 Frame-H2  
 316 GTACACGATGCACTGGGTAAAACAGAGGCCTGGACAGGGTCTGGAATGGATTGGATACA  
 53► Y T M H W V K Q R P G Q G L E W I G Y  
 CDR-H2  
 375 TTAATCCTAGCCGTGGTTATACTAATTACAATCAGAAGTTCAAGGACAAGGCCA  
 73► I N P S R G Y T N Y N Q K F K D K A  
 Frame-H3  
 429 CATTGACTACAGACAAATCCTCCAGCACAGCCTACATGCAACTGAGCAGCCTGACATCTGAG  
 91► T L T T D K S S S T A Y M Q L S S L T S E  
 PstI CDR-H3  
 491 GACTCTGCAGTCTATTACTGTGCAAGATATTATGATGATCATTACAGCCTTGACTAC  
 112► D S A V Y Y C A R Y Y D D H Y S L D Y  
 Frame-H4 CH1 HindIII Yol linker  
 548 TGGGGCCAAGGCACCACTCTCACAGTCTCCTCAGCCAAAACAACACCCAAGCTTGAAGAAGG  
 131► W G Q G T T L T V S S A K T T P K L E E G  
 EcoRV  
 MluI VL anti-CD3 Frame-L1  
 610 TGAATTTTCAGAAGCACGCGTAGATATCGTGCTCACTCAGTCTCCAGCAATCATGTCTGCAT  
 151► E F S E A R V D I V L T Q S P A I M S A  
 PstI CDR-L1  
 672 CTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCAAGTGTAAGTTACATGA  
 172► S P G E K V T M T C S A S S S V S Y M  
 Frame-L2 CDR-L2  
 729 ACTGGTACCAGCAGAAGTCAGGCACCTCCCCCAAAGATGGATTATGACACATCCAAA  
 191► N W Y Q Q K S G T S P K R W I Y D T S K  
 Frame-L3  
 788 CTGGCTTCTGGAGTCCCTGCTCACTTCAGGGGCAGTGGGTCTGGGACCTCTTACTCTCTC  
 211► L A S G V P A H F R G S G S G T S Y S L  
 CDR-L3  
 848 ACAATCAGCGGCATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGCAGTGGAGTAG  
 231► T I S G M E A E D A A T Y Y C Q Q W S S  
 Frame-L4 C kappa  
 907 TAACCCATTTCAGGTTTCGGCTCGGGGACAAAGTTGGAAATAAACCGGGCTGATACTGCACC  
 250► N P F T F G S G T K L E I N R A D T A P  
 BamHI c-myc epitope His6 tail  
 967 AACTGGATCCGAACAAAAGCTGATCTCAGAAGAAGACCTAAACTCACATCACCATCACCATC  
 270► T G S E Q K L I S E E D L N S H H H H H  
 XbaI  
 1029 ACTAATCTAGA  
 291► H .

Fig. 2

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EcoRI RBS PelB leader  
 1 GAATTCATTAAAGAGGAGAAATTAACCAATGAAATACCTATTGCCTACGGCAGCCGCTGGCTTGCTG  
 1► M K Y L L P T A A A G L L  
 NcoI ♦ VH anti-CD3 Frame-H1  
 67 CTGCTGGCAGCTCAGCCGGCCATGGCGCAGGTGCAGCTGCAGCAGTCTGGGGCTGAACTGGCAAGAC  
 14► L L A A Q P A M A Q V Q L Q Q S G A E L A R  
 CDR-H1  
 134 CTGGGGCCTCAGTGAAGATGTCTCTGCAAGGCTTCTGGCTACACCTTTACTAGGTACACGATGCA  
 36► P G A S V K M S C K A S G Y T F T R Y T M H  
 Frame-H2 CDR-H2  
 198 CTGGGTAAAACAGAGGCCTGGACAGGGTCTGGAATGGATTGGATACATTAATCCTAGCCGTGG  
 57► W V K Q R P G Q G L E W I G Y I N P S R G  
 Frame-H3  
 261 TTATACTAATTACAATCAGAAGTTCAAGGACAAGGCCACATTGACTACAGACAAATCCTCCA  
 78► Y T N Y N Q K F K D K A T L T T D K S S  
 323 GCACAGCCTACATGCAACTGAGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATA  
 99► S T A Y M Q L S S L T S E D S A V Y Y C A R Y  
 CDR-H3 Frame-H4  
 390 TTATGATGATCATTACAGCCTTGACTACTGGGGCCAAGGCACCACTCTCACAGTCTCCTCAG  
 121► Y D D H Y S L D Y W G Q G T T L T V S S  
 CH1 Linker VL anti-CD19 Frame-L1  
 452 CCAAAACAACACCCAAAGCTTGGCGGTGATATCTTGCTCACCCAAACTCCAGCTTCTTTGGCTGTG  
 142► A K T T P K L G G D I L L T Q T P A S L A V  
 CDR-L1  
 517 TCTCTAGGGCAGAGGGCCACCATCTCCTGCAAGGCCAGCCAAAGTGTTGATTATGATGGTGA  
 164► S L G Q R A T I S C K A S Q S V D Y D G D  
 Frame-L2  
 579 TAGTTATTTGAACTGGTACCAACAGATTCCAGGACAGCCACCCAAACTCCTCATCTATGATGCA  
 184► S Y L N W Y Q Q I P G Q P P K L L I Y D A  
 CDR-L2 Frame-L3  
 643 TCCAATCTAGTTTCTGGGATCCCACCCAGGTTTAGTGGCAGTGGGTCTGGGACAGACTTCACCC  
 206► S N L V S G I P P R F S G S G S G T D F T  
 CDR-L3  
 707 TCAACATCCATCCTGTGGAGAAGGTGGATGCTGCAACCTATCACTGTGAGCAAAGTACTGAGGA  
 227► L N I H P V E K V D A A T Y H C Q Q S T E D  
 Frame-L4 C kappa NotI  
 771 TCCGTGGACGTTTCGGTGGAGGCACCAAGCTGGAAATCAAACGGCTGATGCTGCGGCCGCTGGATCC  
 248► P W T F G G G T K L E I K R A D A A A A G S  
 c-myc epitope His6 tail BgIII  
 838 GAACAAAAGCTGATCTCAGAAGAAGACCTAAACTCACATCACCATCACCATCACTAAAGAT  
 271► E Q K L I S E E D L N S H H H H H H .  
 899 CT

Fig. 3

BgIII RBS Pel B leader  
 1 AGATCTATTAAAGAGGAGAAATTAACCATGAAATACCTATTGCCTACGGCAGCCGCTGGCTTGC  
 1 M K Y L L P T A A A G L  
 NcoI ♦ VH anti-CD19 Frame-H1  
 65 TGCTGCTGGCAGCTCAGCCGGCCATGGCGCAGGTGCAGCTGCAGCAGTCTGGGGCTGAGCTGGT  
 13 L L L A A Q P A M A Q V Q L Q Q S G A E L V  
 CDR-H1  
 129 GAGGCCTGGGTCCTCAGTGAAGATTTCTGCAAGGCTTCTGGCTATGCATTAGCTACTG  
 34 R P G S S V K I S C K A S G Y A F S S Y W  
 Frame-H2  
 192 GATGAAC TGGGTGAAGCAGAGGCCTGGACAGGGTCTTGAGTGGATTGGACAGATTTGGCCT  
 55 M N W V K Q R P G Q G L E W I G Q I W P  
 CDR-H2  
 253 GGAGATGGTGATACTAACTACAATGGAAAGTTCAAGGGTAAAGCCACTCTGACTGCA  
 76 G D G D T N Y N G K F K G K A T L T A  
 Frame-H3  
 310 GACGAATCCTCCAGCAGAGCCTACATGCAACTCAGCAGCCTAGCATCTGAGGACTCTGCGGTCT  
 95 D E S S S T A Y M Q L S S L A S E D S A V  
 CDR-H3  
 374 ATTTCTGTGCAAGA CGGGAGACTACGACGGTAGGCCGTTATTACTATGCTATGGACT  
 116 Y F C A R R E T T T V G R Y Y Y A M D  
 Frame-H4 CH1 Linker  
 431 ACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCAGCCAAAACAACACCCAAAGCTTGGCGGT  
 135 Y W G Q G T S V T V S S A K T T P K L G G  
 VL anti-CD3 Frame-L1  
 493 GATATCGTGCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGA  
 156 D I V L T Q S P A I M S A S P G E K V T M  
 CDR-L1 Frame-L2  
 557 CCTGCAGTGCCAGCTCAAGTGTAAGTTACATGAACTGGTACCAGCAGAAGTCAGGCACC  
 177 T C S A S S S V S Y M N W Y Q Q K S G T  
 CDR-L2  
 616 TCCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCACTTC  
 197 S P K R W I Y D T S K L A S G V P A H F  
 Frame-L3  
 676 AGGGGCAGTGGGTCTGGGACCTCTTACTCTCTCACAATCAGCGGCATGGAGGCTGAAGATGCTG  
 217 R G S G S G T S Y S L T I S G M E A E D A  
 CDR-L3 Frame-L4  
 740 CCACTTATTACTGCCAGCAGTGGAGTAGTAACCCATTACGTTTCGGCTCGGGGACAAAG  
 238 A T Y Y C Q Q W S S N P F T F G S G T K  
 C kappa c-myc epitope  
 799 TTGGAAATAAACCGGGCTGATACTGCACCAACTGGATCCGAACAAAAGCTGATCTCAGAA  
 258 L E I N R A D T A P T G S E Q K L I S E  
 His6 tail XbaI  
 859 GAAGACCTAAACTCACATCACCATCACCATCACTAATCTAGA  
 278 E D L N S H H H H H H .

Fig. 3 (Fortsetzung)